AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Cancel Claims 1-2.

3. (Currently amended)   ~~The system of Claim 1,~~ A system for determining positioning in an automated data storage library, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said system comprising:

at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; and

at least one processor for operating said at least one robot accessor in accordance with a calibration system, said at least one processor, conducting a rezero operation,

moves said robot accessor sensor to said expected location of said at least one reference point; and

if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

wherein said at least one processor, during said rezero operation, if said one reference point is sensed by said robot accessor;

compares said sensed location of said one reference point to said expected location; if said comparison indicates an offset between said sensed location and said expected location of said one reference point, moves said robot accessor to a second expected location of a second reference point; and

if said second reference point is sensed by said robot accessor sensor at substantially said second expected location, updates said calibration system with respect to said one reference point, and said rezero operation is completed.

4. (Currently amended)   ~~The system of Claim 1,~~ A system for determining positioning in an automated data storage library, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said system comprising:

at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; and

at least one processor for operating said at least one robot accessor in accordance with a calibration system, said at least one processor, conducting a rezero operation,

moves said robot accessor sensor to said expected location of said at least one reference point; and

if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

wherein said at least one processor, during said rezero operation, if said one reference point is sensed by said robot accessor sensor;

compares said sensed location of said one reference point to said expected location of said one reference point;

if said comparison indicates an offset between said sensed location and said expected location of said one reference point moves, said robot accessor to a second expected location of a second reference point;

if said second reference point is sensed by said robot accessor sensor, but is offset from said second expected position;

determines whether said offset of said second reference point is consistent with said offset of said one reference point; and

if said offsets are consistent, updates said calibration system with respect to said one reference point and/or said second reference point, and said rezero operation is completed.

Cancel Claim 5.

6. (Currently amended)   ~~The system of Claim 5,~~ A system for determining positioning in an automated data storage library, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said system comprising:

at least one unique reference at an unique location in said automated data storage library; and

at least one processor for operating said at least one robot accessor in accordance with a calibration system, said at least one processor, conducting a rezero operation,

moves said robot accessor sensor toward said unique location of said unique reference and/or said home position; and

if said unique reference is sensed by said at least one robot accessor sensor, determines said unique location and completes said rezero operation;

wherein said at least one processor, during said rezero operation, if said unique reference is found, moves said robot accessor to said home position at high speed.

Cancel Claims 7-9.

10. (Currently amended) ~~The automated data storage library of Claim 8,~~ An automated data storage library, comprising:

a plurality of storage shelves for storing data storage media;

at least one data storage drive for reading and/or writing data with respect to said data storage media;

at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor;

at least one home position for said at least one robot accessor;

at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; and

at least one processor for operating said at least one robot accessor in accordance with a calibration system, said at least one processor, conducting a rezero operation,

moves said robot accessor sensor to said expected location of said at least one reference point; and

if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

wherein said at least one processor, during said rezero operation, if said one reference point is sensed by said robot accessor;

compares said sensed location of said one reference point to said expected location; if said comparison indicates an offset between said sensed location and said expected location of said one reference point, moves said robot accessor to a second expected location of a second reference point; and

if said second reference point is sensed by said robot accessor sensor at substantially said second expected location, updates said calibration system with respect to said one reference point, and said rezero operation is completed.

11. (Currently amended)   ~~The automated data storage library of Claim 8,~~ An automated data storage library, comprising:

_____   a plurality of storage shelves for storing data storage media;

_____   at least one data storage drive for reading and/or writing data with respect to said data storage media;

_____   at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor;

_____   at least one home position for said at least one robot accessor;

_____   at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; and

_____   at least one processor for operating said at least one robot accessor in accordance with a calibration system, said at least one processor, conducting a rezero operation,

_____   moves said robot accessor sensor to said expected location of said at least one reference point; and

_____   if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

wherein said at least one processor, during said rezero operation, if said one reference point is sensed by said robot accessor sensor;

compares said sensed location of said one reference point to said expected location of said one reference point;

if said comparison indicates an offset between said sensed location and said expected location of said one reference point, moves said robot accessor to a second expected location of a second reference point;

if said second reference point is sensed by said robot accessor sensor, but is offset from said second expected position;

determines whether said offset of said second reference point is consistent with said offset of said one reference point; and

if said offsets are consistent, updates said calibration system with respect to said one reference point and/or said second reference point, and said rezero operation is completed.

Cancel Claim 12.

13. (Currently amended)   ~~The automated data storage library of Claim 12,~~ An automated data storage library, comprising:

     a plurality of storage shelves for storing data storage media;

     at least one data storage drive for reading and/or writing data with respect to said data storage media;

     at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor;

     at least one home position for said at least one robot accessor;

     at least one unique reference at an unique location in said automated data storage library; and

     at least one processor for operating said at least one robot accessor in accordance with a calibration system, said at least one processor, conducting a rezero operation,

     moves said robot accessor sensor toward said unique location of said unique reference and/or said home position; and

     if said unique reference is sensed by said at least one robot accessor sensor, determines said unique location and completes said rezero operation;

wherein said at least one processor, during said rezero operation, if said unique reference is found, moves said robot accessor to said home position at high speed.

Cancel Claims 14-17.

18. (Currently Amended)   ~~The method of Claim 16,~~ A method for determining positioning in an automated data storage library, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said automated data storage library additionally comprising at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; said method comprising the steps of:

conducting a rezero operation in accordance with a calibration system, comprising:

moving said robot accessor sensor to said expected location of said at least one reference point; and

if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

additionally comprising, during said rezero operation:

if said one reference point is sensed by said robot accessor, comparing said sensed location of said one reference point to said expected location;

if said comparison indicates an offset between said sensed location and said expected location of said one reference point, moving said robot accessor to a second expected location of a second reference point; and

if said second reference point is sensed by said robot accessor sensor at substantially said second expected location, updating said calibration system with respect to said one reference point, and said rezero operation is completed.

19. (Currently amended) ~~The method of Claim 16,~~ A method for determining positioning in an automated data storage library, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said automated data storage library additionally comprising at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; said method comprising the steps of:

conducting a rezero operation in accordance with a calibration system, comprising:

moving said robot accessor sensor to said expected location of said at least one reference point; and

if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

additionally comprising, during said rezero operation:

if said one reference point is sensed, comparing said sensed location of said one reference point to said expected location of said one reference point;

if said comparison indicates an offset between said sensed location and said expected location of said one reference point, moving said robot accessor to a second expected location of a second reference point;

if said second reference point is sensed but is offset from said second expected position, determining whether said offset of said second reference point is consistent with said offset of said one reference point; and

if said offsets are consistent, updating said calibration system with respect to said one reference point and/or said second reference point, and completing said rezero operation.

Cancel Claim 20.

21. (Currently amended) ~~The method of Claim 20,~~ A method for determining positioning in an automated data storage library, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said automated data storage library additionally comprising at least one unique reference at an unique location in said automated data storage library; said method comprising the steps of:

      conducting a rezero operation in accordance with a calibration system, comprising:

      moving said robot accessor sensor toward said unique location of said unique reference and/or said home position; and

      if said unique reference is sensed by said robot accessor sensor, determining said unique location and completing said rezero operation;

      additionally comprising, during said rezero operation:

      if said unique reference is found, said step of completing said rezero operation comprises moving said robot accessor to said home position at high speed.

Cancel Claims 22-24.

25. (Currently amended) ~~The computer program product of Claim 23, additionally comprising:~~ A computer program product usable with at least one programmable computer processor having computer readable code embodied therein, said at least one programmable computer processor for operating said at least one robot accessor of an automated data storage library in accordance with a calibration system to conduct a rezero operation, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot

accessor; said automated data storage library additionally comprising at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; said computer program product comprising:

computer readable program code causing said at least one programmable computer processor to move said robot accessor sensor to said expected location of said at least one reference point;

computer readable program code causing said at least one programmable computer processor to, if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

computer readable program code causing said at least one programmable computer processor to, if said one reference point is sensed by said robot accessor, compare said sensed location of said one reference point to said expected location;

computer readable program code causing said at least one programmable computer processor to, if said comparison indicates an offset between said sensed location and said expected location of said one reference point, move said robot accessor to a second expected location of a second reference point; and

computer readable program code causing said at least one programmable computer processor to, if said second reference point is sensed by said robot accessor sensor at substantially said second expected location, update said calibration system with respect to said one reference point, and said rezero operation is completed.

26. (Currently amended)   ~~The computer program product of Claim 23, additionally comprising:~~ A computer program product usable with at least one programmable computer processor having computer readable code embodied therein, said at least one programmable computer processor for operating said at least one robot accessor of an automated data storage library in accordance with a calibration system to conduct a rezero operation, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and

said automated data storage library having at least one home position for said at least one robot accessor; said automated data storage library additionally comprising at least one reference point located at an expected location in said automated data storage library remote from said robot accessor home position; said computer program product comprising:

computer readable program code causing said at least one programmable computer processor to move said robot accessor sensor to said expected location of said at least one reference point;

computer readable program code causing said at least one programmable computer processor to, if said one reference point is sensed by said robot accessor sensor at substantially said expected location, said rezero operation is completed;

computer readable program code causing said at least one programmable computer to, if said one reference point is sensed, compare said sensed location of said one reference point to said expected location of said one reference point;

computer readable program code causing said at least one programmable computer to, if said comparison indicates an offset between said sensed location and said expected location of said one reference point, move said [[rebot]] robot accessor to a second expected location of a second reference point;

computer readable program code causing said at least one programmable computer processor to detect if said second reference point is offset from said second expected location;

computer readable program code causing said at least one programmable computer processor to, if said second reference point is offset from said second expected position, determine whether said offset of said second reference point is consistent with said offset of said one reference point; and

computer readable program code causing said at least one programmable computer processor to, if said offsets are consistent, update said calibration system with respect to said one reference point and/or said second reference point, and complete said rezero operation.

Cancel Claim 27.

28. (Currently amended) ~~The computer program product of Claim 27, additionally comprising:~~ A computer program product usable with at least one programmable computer processor having computer readable code embodied therein, said at least one programmable computer processor for operating said at least one robot accessor of an automated data storage library in accordance with a calibration system to conduct a rezero operation, said automated data storage library having a plurality of storage shelves for storing data storage media; at least one data storage drive for reading and/or writing data with respect to said data storage media; and at least one robot accessor for transporting said data storage media between said plurality of storage shelves and said at least one data storage drive; said robot accessor having at least one sensor, and said automated data storage library having at least one home position for said at least one robot accessor; said automated data storage library additionally comprising at least one unique reference at an unique location in said automated data storage library; said computer program product comprising:

computer readable program code causing said at least one programmable computer processor to move said robot accessor sensor toward said unique location of said unique reference and/or said home position;

computer readable program code causing said at least one programmable computer processor to, if said unique reference is sensed by said robot accessor sensor, determine said unique location and complete said rezero operation; and

computer readable program code causing said at least one programmable computer processor to, if said unique reference is found, move said robot accessor to said home position at high speed.

Cancel Claims 29-30.